

TEST REPORT

Reference No...... : WTF24D08198015W003
FCC ID : 2BENK-BP223
Applicant..... : Shenzhen Root Innovation Technology Co.,Ltd.
Address..... : #2-201, Floor 2, Hasee Computer Building, No.2 Beier Rd, Bantian Street, Longgang, Shenzhen, Guangdong, China, 518129
Manufacturer : Shenzhen Root Innovation Technology Co.,Ltd.
Address..... : #2-201, Floor 2, Hasee Computer Building, No.2 Beier Rd, Bantian Street, Longgang, Shenzhen, Guangdong, China, 518129
Product..... : Wearable Breast Pump
Model(s) : BP223
Standards..... : 47CFR FCC Part 2 Subpart J Section 2.1093
Date of Receipt sample : 2024-01-18
Date of Test : 2024-01-26 to 2024-03-29
Date of Issue..... : 2024-09-13
Test Result..... : Pass

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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3. Revision History

Test Report No.	Date of Receipt Sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTF24D08198015W003	2024-01-18	2024-01-26 to 2024-03-29	2024-09-13	Version 1	Updated	Valid
Note: This report is based on WTF24D01011989W003 to update the EUT photos, which involved with the EUT appearance color and IC of the circuit board. The update will not affect the Max. RF output power.						

4. General Information

4.1. General Description of E.U.T.

Product:	Wearable Breast Pump
Model(s):	BP223
Model Description:	N/A
Test Sample No.:	1-1/1
Bluetooth Version:	5.3
Hardware Version:	M9-MB-V0D
Software Version:	V4.3

4.2. Details of E.U.T.

Operation Frequency:	2402~2480MHz
Max. RF output power:	3.13dBm
Type of Modulation:	GFSK
Antenna installation:	PCB Antenna
Antenna Gain:	2.66dBi

Note:

#: The antenna gain is provided by the applicant, and the applicant should be responsible for its authenticity, WALTEK lab has not verified the authenticity of its information.

Ratings: DC 5V  2A, Power: 10W from USB
DC 3.7V, 1800mAh, 6.66Wh from battery

4.3. Test Facility

The test facility has a test site registered with the following organizations:

ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.

Waltek Testing Group Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files.

Registration number 7760A, October 15, 2016.

FCC Designation No.: CN1201. Test Firm Registration No.: 523476.

Waltek Testing Group Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration number 523476, September 10, 2019.

4.4. Subcontracted

Whether parts of tests for the product have been subcontracted to other labs:

☐ Yes ☒ No

If Yes, list the related test items and lab information:

Test Lab: N/A

Lab address: N/A

Test items: N/A

4.5. Abnormalities from Standard Conditions

None.

5. Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	47CFR FCC Part 2 Subpart J § 2.1093	PASS

6. RF Exposure

Test Requirement: 47CFR FCC Part 2 Subpart J § 2.1093

Evaluation Method: 47CFR FCC Part 1 Subpart I §1.1307,

KDB 447498 D01 General RF Exposure Guidance v06

6.1. Procedures and Requirements

According to §15.247 (i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR, where

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

6.2. Calculation Method

$$\text{Result} = P \sqrt{F} / D$$

P= Maximum turn-up power in mW

F= Channel frequency in GHz

D= Minimum test separation distance in mm

6.3. Test Result

A distance of 5mm normally can be maintained between the user and the device.

Modulation	CH	Freq. (GHz)	Max Power (dBm)	Max. Tune-up Power (dBm)	Max. Tune-up Power (mW)	Distance (mm)	Result	Limit
GFSK	High	2.48	3.13	4.13	2.59	5	0.82	3

Conclusion:

No SAR measurement is required.

=====End of Report=====